

TABLE 1. MAA immunophenotyping of melanoma vaccine

Antisera	MAA defined (kilodaltons)	Presence of MAA (vaccine batch)			Ref.
		1	2	3	
Mouse monoclonal					
225.28S	240 +	+	+	+	23
9.2.27	240 +	+	+	+	24
436.G10	122-130	0	NT ^a	NT	25
Nu4B	26, 29, 95, 116	+	NT	NT	17
376.96	94	0	NT	NT	15
118.1	94-97	+	+	+	27
465.12S	94	0	NT	NT	26
McTBT	69-70	0	NT	NT	
Rabbit polyclonal					
SB29, SB54	240	+	+	+	11
SB29, SB54	150 ^a	+	+	+	11
SB29, SB54	140 ^a	+	+	+	11
SB29, SB54	120	+	+	+	11
SB29, SB54	95	+	+	+	11
SB29, SB54	75	+	+	+	11

^a Not reactive with SB54.^b (NT) not tested.

TABLE 2. *Effect of detergent and ultracentrifugation on macromolecules, MAAs, and Dr antigens in material shed by melanoma cells*

Treatment ^a	Presence in shed material after ultracentrifugation			
	¹²⁵ I-macromolecules ^b		¹²⁵ I-MAAs ^c	
	cpm	Change ^d (%)	cpm	Change (%)
None	10,362		817	428
Ultracentrifugation	6,325	-40	258	0
NP-40 + ultracentrifugation	8,612	-17	574	0
				Change (%)
				-100
				-100

^a Material shed by radiiodinated melanoma cells was ultracentrifuged in 0.5-ml aliquots at 100,000 *g* for 90 min, incubated in a final concentration of 0.5% NP-40 for 2 h prior to ultracentrifugation, or not treated. All were subsequently assayed for radioactivity associated with macromolecules, MAAs defined by antiserum SB29, or Dr antigens. All assays were performed on 0.025-ml aliquots of material in the presence of a final concentration of 0.5% NP-40.

^b Assayed by precipitation with 10% trichloroacetic acid.

^c Assayed by protein A-immune precipitation with specific antiserum.

^d From untreated control.

TABLE 3. Surface MAAs expressed by melanomas in various individuals

MAA	Antiserum	Expression of MAA in melanoma*												
		HM31	HM34	HM49	HM54	HM60	HM80	G361	SK23	SK27	SK28	SK29	SK37	VAL
240+	SB29	+	+	-	+	+	-	++	++	+	++	+	+	++
	SR54	+	+	-	+	+	+	++	+	-	++	+	+	++
	224.28S	-	-	-	-	+	++	-	+	-	++	++	++	++
150	9.2.27	-	-	-	-	+	++	-	+	-	++	++	++	++
	SB29	+	+	+	+	-	-	+	-	-	-	-	-	-
	SB29	+	+	+	+	-	-	++	-	-	-	-	-	-
	SB29	++	++	+	++	-	-	++	-	-	-	-	-	-
140	SB29	+	+	+	+	-	-	++	-	-	-	-	-	-
	SB29	++	++	+	++	-	-	++	-	-	-	-	-	-
	SB29	+	+	+	+	-	-	++	-	-	-	-	-	-
	SB29	++	++	+	++	-	-	++	-	-	-	-	-	-
120	SB54	+	+	+	+	-	-	++	-	-	-	-	-	-
	SB54	+	+	+	+	-	-	++	-	-	-	-	-	-
	SB54	+	+	+	+	-	-	++	-	-	-	-	-	-
	SB54	+	+	+	+	-	-	++	-	-	-	-	-	-
116	Na4B	-	-	-	-	-	-	++	+	+	-	-	-	+
	SB29	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB29	++	++	-	++	+	-	++	+	+	-	-	-	+
	SB29	++	++	-	++	+	-	++	+	+	-	-	-	+
95-97	SB54	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB54	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB54	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB54	+	+	-	++	+	-	++	+	+	-	-	-	+
75	SB29	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB29	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB29	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB29	+	+	-	++	+	-	++	+	+	-	-	-	+
70	SB54	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB54	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB54	+	+	-	++	+	-	++	+	+	-	-	-	+
	SB54	+	+	-	++	+	-	++	+	+	-	-	-	+
Me3 TBT	Me3 TBT	-	-	-	-	-	-	+	+	+	-	-	-	-
	Me3 TBT	-	-	-	-	-	-	+	+	+	-	-	-	-

* Assayed by indirect immunoprecipitation with protein A-sepharose.

TABLE 4. *Characteristics of immunized patients*

Patient no.	Age	Sex	Previous treatment other than surgery	Site of metastasis	Duration of metastatic disease prior to immunization (months)	No. of immunization	Current status ^a	Length of follow-up ^b (months)
1	31	F	BCG, ^c DTIC	Skin, lung	12	10	P	1/4
2	24	F	None	Lung	2	10	P	3
3	53	M	None	Skin	2	13	P	8
4	58	F	None	Skin	2	8	P	1
5	48	M	None	Skin	1	12	P	3
6	54	M	None	Skin	2	11	P	3
7	58	M	None	Skin	2	14	P	4
8	68	M	None	Skin, lung	2	10	P	6
9	75	F	DTIC, Actinomycin D	Skin	36	17	S	14
10	46	M	None	Skin	1	18	R	24
15	29	M	None	Skin	4	8	P	2
17	68	M	None	Skin	4	8	P	2
20	38	M	None	Skin, lung	3	13	P	4

^a (P) progression; (S) stable; (R) regression.

^b From onset of immunotherapy.

^c (BCG) bacillus Calmette-Guérin.

TABLE 5. *Immunogenicity of melanoma vaccine*

Patient no.	Immune response to melanoma ^a		
	Humoral ^b	Cellular ^c	Either
1	++	0	5
2	+	10	+
3	+	0	+
4	0	0	0
5	±	5	0
6	0	0	0
7	0	0	+
8	0	0	0
9	0	20	+
10	+	10	+
15	++	0	+
17	0	NT	0
20	NT	25	+
No. (%) positive:	5 (38%)	4 (31%)	8 (62%)

^a (±) 25–49%, (+) 50–100%, and (++) 100%, increase over preimmunization level of melanoma antibodies; (NT) not tested.

^b By indirect immunoprecipitation of m1-melanoma macromolecules.

^c By skin test to 10 µg vaccine; results represent millimeters of average induration at 24–48 h.

TABLE 6. Antibodies to fetal calf serum proteins in patients immunized to melanoma vaccine

Patient no.	Antibodies to preimmunization	^{125}I -FCS* (2 months' postimmunization)
Melanoma		
1	18.3	0.7
2	0.0	0.1
3	0.0	0.0
4	0.1	0.1
5	0.1	0.2
6	0.1	<0.1
7	<0.1	0.1
8	<0.1	<0.1
9	0.6	0.8
10	0.0	0.0
15	0.1	<0.1
17	0.3	0.4
20	0.0	0.0
Normal		
2003	0.0	
2004	0.1	
2005	<0.1	
2006	0.0	
2007	0.0	
2008	0.0	
2009	0.0	
2010	0.1	
2011	0.0	
2012	0.0	
2013	0.0	
ANTI-FCS	68.0	

* Percent of radioactivity associated with ^{125}I -FCS specifically immunoprecipitated by serum and protein A-sepharose.